CHAPTER 3

MACHINE FORMATS FOR INPUT DATA

A. FIXED-FIELD PUNCH CARD INSTRUCTIONS

1. General Information

     a. Data may be submitted for input to the R&TWUDB by means of fixed-field punched cards (see table 3-1, Fixed-Field Card Formats).

     b. Columns 2 through 9 (agency accession), 10 through 15 (date of summary), and 16 (transaction type) are control fields common to all input cards for the same transaction and are mandatory in all cards regardless of the type of transaction.

     c. Each card shall be identified by an alphabetic card type code in column 17 and a 2-digit sequence number in columns 18 and 19.

     d. An A∅1 card complete at least through column 19 is mandatory in any input transaction.

     e. The data pertinent to each card type and sequence number are entered in columns 20 through 80.

2. Justification of Fields

     a. All data fields are to be punched left-justified except dollar and work-year fields when the length of a **valid** entry may be less than the fixed-field length.

     b. The following dollar and work-year fields shall be punched right-justified with preceding zeros in the unused high-order columns:

Field Number	Field Name	Card Type
17D2	Contract or Grant Amount	E
17F	Contract or Grant Cumulative Dollar Total	E
18A	Fiscal Year Professional Work-Years	F
18l3	Fiscal Year Funds	F

3. Entries for Narrative-Type Fields

     a. The following fields shall have the security code (U, C, or S) punched in column 20 in the first card of the series. Punch the first character of the text in column 21 of the first card of the series. Punch continuously through column 80. Start the text of each trailer card in column 20 unless it coincides with a normal space, then begin the next word in column 21.

Field Number	Field Name	Cards
11	Title	C∅1 – C∅4
23	Objective	Q∅1 – Q45
24	Approach	R∅1 – R45
25	Progress	S∅1 – S45

     b. The narrative portion of the work unit comprises four data elements: title (field 11), objective (field 23), approach (field 24), and

progress (field 25).   The objective and approach may be combined in field 23
as an abstract.   These fields should provide a technical description of the
work, its purpose and progress.   The narratives shall be sufficient to identify
the work unit and its progress, but shall be brief.

      c.   Punch each keyword (field 22) in columns 21 through 69 of separate
cards, P∅1 to P20.   Punch the security code in column 20 of each card.

      d.   The maximum entry of the title (field 11) is 244 characters and
spaces .   Security code (U) is entered in column 20.

4. New Transactions (Card Column 16 = A)

      In general, on a NEW transaction all the data fields required for a
complete description of a work unit shall be entered and punched.

5. Modification Transactions to Work Unit Records (Card Column 16 = D, H, K, or R)

      a.   An A∅1 card punched card columns 2 through 19 is mandatory.

      b.   Only those data fields to be added, changed, or deleted by a D,
H, K, or R transaction shall be punched.   Other fields that are not required
shall be left blank (unpunched).

      c.   A delete code plus (+) sign is provided for use by the contributor
on modification transactions to delete certain previously reported data from
individual data fields within a record.   This is accomplished by entering a
plus (-t) sign in the high-order position of the specific data field in the
card or card image.   Deletions may occur on the same transaction with modifi-
cations that add or replace other data.   Exercise care in the use of the
delete code because for many data elements a blank on the record is an invalid
condition; therefore, an attempt to delete such data may cause the transaction
to be rejected.   The following is a list of those fields that may be deleted.

Field Number	Field Name
7	Regrading
8A2	Additional Security Restriction
10B1 through 10C3	Contributing Number or Codes
12B, 12C	Scientific and Technological Area Fields and Groups Codes
15B, 15C	Funding Organizations
17A1 through 17F	Contract or Grant Data
20C, 20D	Principal Investigator's Name, Telephone Number
20F, 20G	Associate Investigator's Name
21A through 21D	Studies and Analyses Data (See Appendix D)
2 1E	Civilian and Military Application

      d.   Changes, corrections, or additions to a previously submitted
title, objective, approach, or progress field can be made only by resubmitting
the appropriate field in its entirety.

      e.   Certain groups of data elements are considered sets of data
elements.   Changes, corrections, or additions to any elements of a set shall be
made by resubmitting the entire set.   The following are the groups of data
elements that comprise such sets:

Field Number	Field Name
10A1	Primary Program Element Number
10A2	Primary Project Number
10A3	Primary Task Area Number
10A4	Work Unit Number
---	---
10B1	First Contributing Program Element
10B2	First Contributing Project Number
10B3	First Contributing Task Area Number
---	---
10C1	Second Contributing Program Element Number
10C2	Second Contributing Project Number
10C3	Second Contributing Task Area Number
---	---
18	Fiscal Year
18A	Fiscal Work-Years
18B	Fiscal Year Funds

B. CARD IMAGE MAGNETIC TAPE INSTRUCTIONS AND LAYOUTS

    1. General Information

        a. Data may be submitted for input to the R&TWUDB by means of
fixed-field card images on card image magnetic tape (see table 3-2, Card Image
Magnetic Tape Layout Format).
        b. Employ either:
            (1) A nine-track, 1600 or 800 BPI, odd parity tape with EBCDIC or
ASCII character set or,
            (2) A seven-track, 800 or 556 BPI, even parity tape with a BCD
character set.
        c. Format in 720 character blocks (9-80 character card images) with
an Inter-Record Gap (IRG) between blocks. Do not use record marks. In the
event that the last block of data is less than 720 characters, complete the
block with a padding of 9's.

    2. Header Label. An 80-position header label is required at the beginning
of every reel of card image magnetic tape submitted containing work unit
input. The label consists of an 80-character record with 40 positions of
identifying information and 40 blank positions. An IRG shall appear between
the header label and the first data record. The following four fields are
required for identification:
        a. Label Identifier. A 5-position constant consisting of the digit
one, the letters HDR, and a blank position (1HDRØ) in positions 1 through 5.
        b. Reel Sequence Number. A 5-position field that indicates the
order of the tape in a multi-reel file. It consists of a minus sign, three
digits, and a blank position (-ØØ1Ø) in positions 16 through 20. Identify a
single-reel file with a reel sequence number of ØØ1.
        c. File Identification. A 10-position field identifying the file
contents and the originating DoD Component in positions 21 through 30. It
consists of the digits 1498, the originating DoD Component digraph, and up to
four additional characters to identify the originating DoD Component.

d. <u>Creation Date</u>. A 5-digit date consisting of two digits for the calendar year and three digits for the day of the year (ordinal date) in positions 31 through 35.

3. <u>Data Layout</u>. Record the data as punch card images formatted as shown on pages 3-1 through 3-3. Conclude the data recording with a tape mark (TM) following the IRG after the last data block. Follow the TM with another IRG and the trailer label.

4. <u>Trailer Label</u>. An 80-position trailer label is required at the end of every reel of card image magnetic tape submitted containing work unit input. The label consists of an end-of-reel (EOR) or end-of-file (EOF) signal, block count, and record count in the first 30 positions, and the marking of the highest security classification recorded on the tape in the remaining 50 positions.

a. <u>Tape Signal</u>. This 4-position field indicates that the tape is an intermediate or final reel. It consists of the digit 1 followed by the letters EOR to indicate an intermediate reel or EOF to indicate a final reel followed by a blank (1EOF⌿ or 1EOR⌿) in positions 1 through 5.

b. <u>Block Count</u>. A 5-digit count recorded in positions 6 through 10 which reflects the number of information blocks written on the tape. Do not include label blocks in the count.

c. <u>Record Count</u>. A 10-digit count recorded in positions 1 through 20 that reflects the number of 80-column card images containing work unit information written on the tape. Do not count 9s records that are used as block padding.

d. Positions 21 through 30 are blank.

e. <u>Classification of Tape</u>. Positions 76 through 78 of the trailer label will reflect the highest classification of any transaction recorded on the reel as determined by the contents of columns 26, 31, and 32 of card type A.

<u>Position</u>	<u>Security Classification</u>	<u>Length</u>
76	U, C, or S	1
77-78	RD, FR, or blank	2

f. Positions 79 and 80 are blank.

5. Affix to each tape reel an external label containing the following information recorded in the internal labels:

   a. File identification.
   b. Creation date.
   c. Classification of tape.
   d. Record count.
   e. Tracks (7 or 9).
   f. Tape density.
   g. Parity.
   h. Reel sequence number (Reel of __).

FIXED-FIELD INPUT CARD FORMATS(AØ1, AØ4, AØ5)

COMMON CONTROL DATA

PRIMARY NUMBER CODES

AGENCY ACCESSION — DATE OF SUMMARY — TRANSACTION TYPE — CARD CODE — SEQUENCE NO. — PREVIOUS SUMMARY DATE — SUMMARY SECURITY — WORK SECURITY — REGRADING — DISTRIBUTION INSTRUCTIONS — ADD. SECURITY RESTRICTION — CONTR ACCESS

10A1 PROGRAM ELEMENT — 10A2 PROJECT — 10A2A AGENCY & PROGRAM — 10A2B SERIAL NO. — 10A3 TASK AREA — 10A4 WORK UNIT NUMBER

7A CLASSIFICATION AUTHORITY

7B1 DATE OF DECLASS — 7B2 DECLASSIFICATION EVENT

YR MO DY

Table 3-1

3-5

FIXED-FIELD INPUT CARD FORMATS- continued
(AØ6, AØ7)

COMMON **CONTROL** DATA

1	2	4			7C1	7C2
AGENCY ACCESSION	**DATE OF SUMMARY**	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	DATE OF DOWN-GRADING	DOWNGRADING EVENT
	YR MO DY		A Ø6		YR MO DY	

ANK

1	2	4			7D	
AGENCY ACCESSION	**DATE OF SUMMARY**	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	CLASSIFICATION DURATION	
	YR MO DY		A 07			

Table 3-1

FIXED-FIELD INPUT CARD FORMATS— continued
(BØ1, CØ1 thru CØ4 and DØ1)

COMMON CONTROL DATA

First card (BØ1):

1 AGENCY ACCESSION	2 DATE OF SUMMARY (YR MO DY)	4 TRANSACTION TYPE / CARD CODE (B) / SEQUENCE NO. (Ø1)	FIRST CONTRIBUTING NUMBER CODES			SECOND CONTRIBUTING NUMBER CODES		
			10B1 PROGRAM ELEMENT	10B2 PROJECT	10B3 TASK AREA	10C1 PROGRAM ELEMENT	10C2 PROJECT	10C3 TASK AREA
3 4 5 6 7 8 9	10 11 12 13 14 15	16 17 18 19	20 21 22 23 24 25 26 27	28 29 30 31 32 33 34 35 36 37 38 39	40 41 42 43 44 45 46 47 48 49	50 51 52 53 54 55 56 57	58 59 60 61 62 63 64 65 66 67 68 69	70 71 72 73 74 75 76 77 78 79 80

Second card (CØ1–CØ4):

1 AGENCY ACCESSION	2 DATE OF SUMMARY (YR MO DY)	4 TRANSACTION TYPE / CARD CODE (C) / SEQUENCE NO. (Ø1 to Ø4)	11 TITLE
		U	(FIRST CARD ONLY, "U" IN COLUMN 20, START TITLE IN CC21) (START TRAILER IN CC20) (MAXIMUM – 244 COLUMNS)
3 4 5 6 7 8 9	10 11 12 13 14 15	16 17 18 19	20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

Third card (DØ1):

1 AGENCY ACCESSION	2 DATE OF SUMMARY (YR MO DY)	4 TRANSACTION TYPE / CARD CODE (D) / SEQUENCE NO. (Ø1)	SCIENTIFIC & TECHNOLOGICAL FIELDS & GROUPS CODES			13 WORK UNIT START DATE (YR MO)	14 EST. COMPL. DATE (YR MO)	FUNDING ORGANIZATIONS			16 PERF. METHOD	BLANK	21A S&A CATEGORY	21B S&A RELATIONSHIPS	21C MODEL AND CODEWORDS	BLANK	21D FOREIGN AREA STUDIES	21E MIL/CIV APPLICATION	
			12A F&G CODE	12B F&G CODE	12C F&G CODE			15A PRIMARY	15B OTHER	15C OTHER									
1 2 3 4 5 6 7 8 9	10 11 12 13 14 15	16 17 18 19	20 21 22 23 24 25	26 27 28 29 30 31	32 33 34 35 36 37	38 39 40 41	42 43 44 45	46 47	48 49	50 51	52	53 54	55	56 57	58 59	60 61	62	63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

Table 3-1

FIXED-FIELD INPUT CARD FORMATS— continued
(EØ1, FØ1, GØ1 and GØ2)

COMMON CONTROL DATA

CONTRACT OR GRANT DATA

| AGENCY ACCESSION | DATE OF SUMMARY YR MO DY | TRANSACTION TYPE | CARD CODE E Ø1 | SEQUENCE NO. | 17A1 EFFECT DATE YR,MO | 17A2 EXPIR DATE YR,MO | 17B | CONTRACT OR GRANT NO. | 17C CONTR. TYPE | 17C PART CODE | 17D2 LATEST DOLLAR AMOUNT (TO NEAREST DOLLAR)* | 17E KIND OF AWRD | 17F CUMULATIVE DOLLAR VALUE (TO NEAREST DOLLAR)* | CUM PTL CODE 17G |

BLANK

| AGENCY ACCESSION | DATE OF SUMMARY YR MO DY | TRANSACTION TYPE | CARD CODE F Ø1 | SEQUENCE NO. | 181 FISCAL YEAR RESOURCE ESTIMATE 181A YR WORKYEARS (IN TENTHS)* | 181B FUNDS (IN THOUSANDS)* | 182 FISCAL YEAR RESOURCE ESTIMATE 182A YR WORKYEARS (IN TENTHS)* | 182B FUNDS (IN THOUSANDS)* | 183 FISCAL YEAR RESOURCE ESTIMATE 183A YR WORKYEARS (IN TENTHS)* | 183B FUNDS (IN THOUSANDS)* |

*RIGHT JUSTIFY, ZERO FILL, NO COMMAS OR DECIMAL POINTS

BLANK

| AGENCY ACCESSION | DATE OF SUMMARY YR MO DY | TRANSACTION TYPE | CARD CODE G Ø1 to Ø2 | SEQUENCE NO. | 19A RESPONSIBLE DoD ORGANIZATION NAME |

BLANK

Table 3-1

3-8

FIXED-FIELD INPUT CARD FORMATS- continued
(GØ3 and HØ1)

COMMON CONTROL OATA

1	2	4			19T	
AGENCY ACCESSION	DATE OF SUMMARY	TRANSACTION CODE	CARD CODE	SEQUENCE NO.	RESP ORG SOURCE CODE	
	YR MO DY	G	Ø3			
2 3 4 5 6 1 8 0	m 11 n 13 14 15 m 17	18 1* 2 4 24 22 24 25	2427	28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80		

1	2	4			19B	
AGENCY ACCESSION	DATE OF SUMMARY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO		
	YR MO DY	H	91			
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 m 19	20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80				RESPONSIBLE 000 ORGANIZATION ADDRESS	

Table 3-1

FIXED-FIELD INPUT CARD FOBMATS- continued.
  (J∅1 and K∅1 thru K∅3)

3-1o

COMMON CONTROL DATA

Table 3-1

FIXED-FIELD CARD FORMATS-- continued
(L∅1 and L∅2, M∅1)

Card 20B

BLANK | AGENCY ACCESSION | DATE OF SUMMARY (YR MO DY) | TRANSACTION TYPE | CARD CODE L | SEQUENCE NO. 01 or 02 | PERFORMING ORGANIZATION

Card 20C / 20H / 20D

BLANK | AGENCY ACCESSION | DATE OF SUMMARY (YR MO DY) | TRANSACTION TYPE | CARD CODE M | SEQUENCE NO. 01 | PRINCIPAL INVESTIGATOR

- NAME
- 20H TITLE
- 20D TELEPHONE NUMBER

Table 3-1

3-11

FIXED--FIELD INPUT CARD FORMATS- continued
(NØ1 , PØ1 to P2Ø, QØ1 thru Q45)

COMMON CONTROL DATA

AGENCY ACCESSION	DATE OF SUMMARY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	20F FIRST ASSOCIATE INVESTIGATOR	20G SECOND ASSOCIATE INVESTIGATOR	

YR MO DY   N   Ø1

AGENCY ACCESSION	DATE OF SUMMARY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	SECURITY (EACH CD.)	22 KEY WORDS (One per card)	

YR MO DY   P   Ø1 to 2Ø

AGENCY ACCESSION	DATE OF SUMMARY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	SECURITY	23 TECHNICAL OBJECTIVE (ABSTRACT)

YR MO DY   a   Ø1 to 45

• ENTER ONLY IN FIRST CARD OF SERIES.
START TEXT IN CC21 OF FIRST CARD.
START TRAILER CARDS IN CC20.

Table 3-1

FIXED-FIELD INPUT CARD FORMATS- continued
(RØ1 thru R45 and. SØ1 thru S45)

COMMON CONTROL DATA

1 AGENCY ACCESSION	2 DATE OF SUMMARY YR MO DY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	SECURITY	24 APPROACH
	1011	R		Ø1 to 45		•ENTER ONLY IN FIRST CARD OF SERIES. START TEXT IN CC21 OF FIRST CARD. START TRAILER CARD IN CC2Ø.

2 3 4 5 6 7 8 9 | 10 11 12 13 14 15 | 16 | 17 | 18 19 | 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1 AGENCY ACCESSION	2 OATE OF SUMMARY YR MO DY	TRANSACTION TYPE	CARD CODE	SEQUENCE NO.	SECURITY	25 PROGRESS
		S		Ø1 to 45		● ENTER ONLY IN FIRST CARD OF SERIES. START TEXT IN CC21 OF FIRST CARD. START TRAILER CARD IN CC2Ø.

1 2 3 4 5 6 7 8 9 | 10 11 12 13 14 15 | 16 | 17 | 18 19 20 | 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

Table 3-1

CARD IMAGE MAGNETIC TAPE LAYOUT FORMAT

HEADER LABEL

LEAD-IN PORTION	LABEL IDENTIFIER		REEL SEQUENCE NUMBER	FILE IDENTIFICATION	CREATION DATE		BLANK	IRG
	1 H D R b	10 11	15 16	20 21	30 31 YEAR DAY	35 36 b	40 41	80

DATA SUBMISSION

v a	RG	DATA	RG	DATA	RG	DATA	RG	TM	IRG	TRAILER LABEL

TRAILER LABEL

IRG	T M	RG	LABEL IDENTIFIER EOF/EOR b	BLOCK COUNT	SEC. CLASS. b b	IRG	T M	TAPE END
			1 5 6	10	76-78 79-80			

Table 3-2

3-14